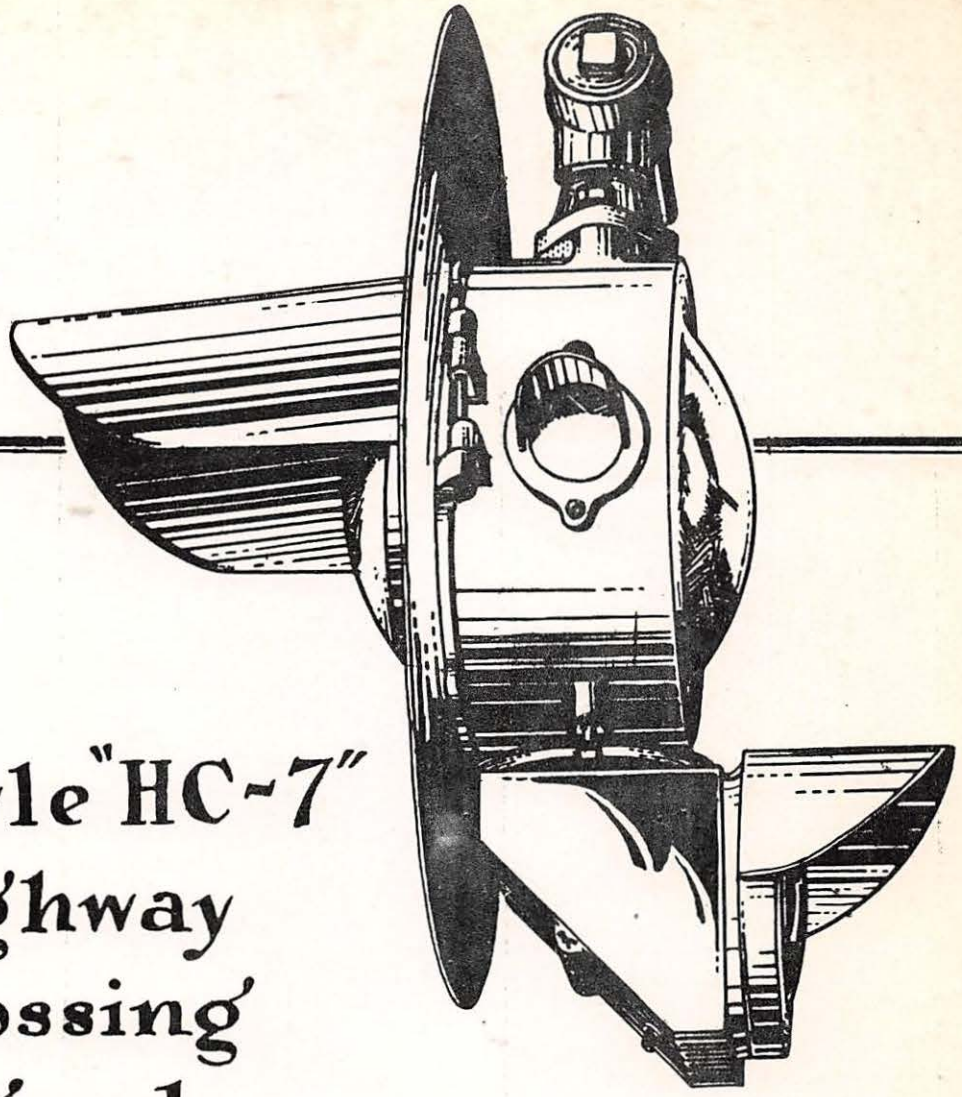

Style "HC-7" Highway Crossing Signal with "Backlight"

S.I.S.
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Union Switch & Signal Co.
Swissvale, Pa.
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Subject	Sales Information Sheet
Style "HC-7" Flashing Light Signal with Backlight.	Number 156
(see Bulletin #125 for "HC-5" Characteristics.)	Date May 20, 1930
	3 Sheets

The Style "HC-7" Color Flashing Light Signal for highway crossing protection is provided with a backlight attachment which enables a motorist or pedestrian to observe the indication displayed by the signal on the opposite side of the track when the indication of the near signal is obscured or passed.

The exterior appearance of the Style "HC-7" Signal is illustrated on the front page and details are shown in Fig. 1. The design of the signal employs the basic principles of the Style "HC-5" unit with the addition of a suspended housing containing a mirror and the necessary backlight lens combination.

Modifications in the Style "HC-5" unit which have been made necessary in the design of the "HC-7" unit consist of:

1. Increasing the depth of the housing unit to provide a tapered opening in the bottom of the case which permits a sufficient amount of light from the lamp bulb to shine on a mirror so mounted that the reflected light beam covers the backlight lens.

2. Changing the door casting so that the seat for the signal lens is the same distance from the lamp as in the Style "HC-5" unit.

3. Placing hinges on the right hand side of the main lensing unit (looking from front) which enables the front of the main unit to be swung open without interferring with the backlight attachment.

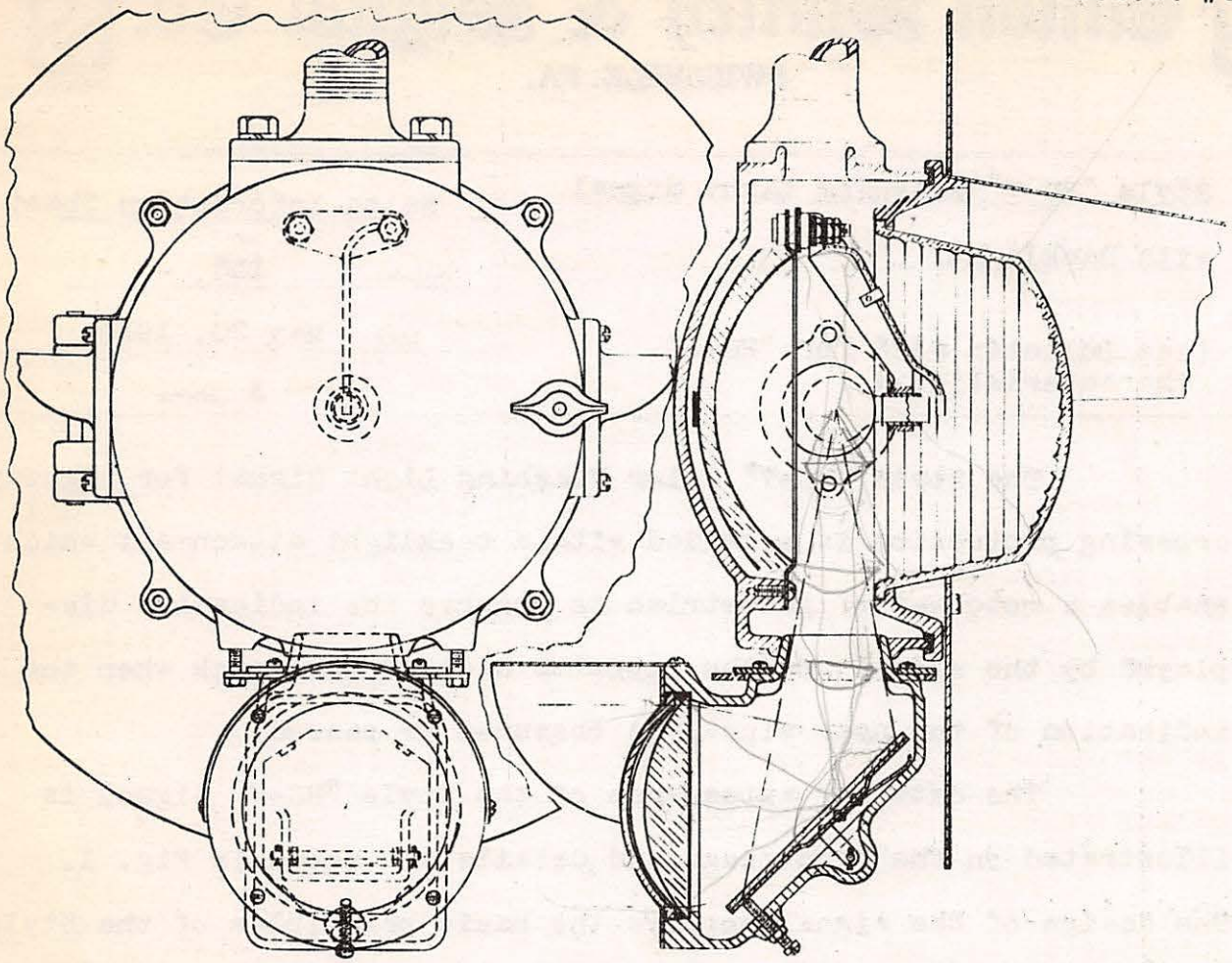

Fig. 1 - Style "HC-7" Lamp Unit

4. Providing pads on the door casting for attaching a background when this is desired.

The optical design of the back indication is similar to that used in the backlights of our color light signal in which the indication is obtained from the bulb for the main indication and takes no light away from the main indication. Furthermore the back indication is so designed that the light shining into the back indication cannot cause a phantom through the main cover glass and vice versa. The "HC-7" main unit has the same optical characteristics as the Style "HC-5" unit described in bulletin #125.

The auxiliary case is mounted adjustably to the main case in such a way that by loosening two bolts, Fig. 2, the auxiliary

case can be turned to any desired position in a horizontal plane. Vertical adjustment of the beam is obtained by adjusting the angular position of the mirror which redirects the light from the lamp through the lens in the auxiliary case. This mirror is adjusted by means of a screw which passes through the auxiliary housing and consequently is accessible and easily adjusted from the outside. The lens combination used for the auxiliary indication is designed to give 20° horizontal spread which together with the horizontal adjustment, is sufficient to take care of any requirements.

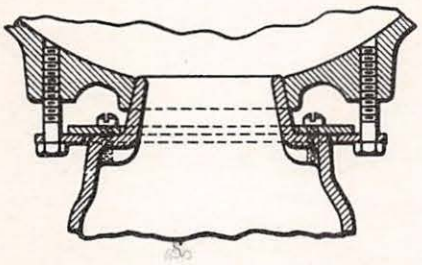

Fig. 2 - View showing means of securing horizontal adjustment of the backlight.

Fig. 2 illustrates the means of securing horizontal adjustment of the backlight. One sheet metal ring is fastened to the top of the auxiliary case; another sheet metal ring fits underneath the first, and is fastened to the main case by two cap screws which may be loosened to allow rotation of the auxiliary case in a horizontal plane.

W.N. Goodwalder
7/17/30